

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

## PCT

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To:  
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INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

Date of mailing  
(day/month/year) 03/12/2004

Applicant's or agent's file reference

CEL62764PC

PAYMENT DUE

within 30 ~~XXX~~ days/days  
from the above date of mailing

International application No.

PCT/EP2004/004883

International filing date  
(day/month/year)

07/05/2004

Applicant

CELLZOME AG

Frist:

Vorfrist:

WV:

1. This International Searching Authority

- (i) considers that there are 2 (number of) inventions claimed in the international application covered by the claims indicated ~~below~~ on the extra sheet:

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~below~~ on the extra sheet:

- (ii) ☒ has carried out a partial international search (see Annex) ☐ will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:

1 - 15

- (iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid

2. The applicant is hereby invited, within the time limit indicated above, to pay the amount indicated below:

EUR 1.550,00 x 1 = EUR 0,00  
Fee per additional invention number of additional inventions total amount of additional fees

Or, \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. ☐ Claim(s) Nos. \_\_\_\_\_ have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority



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Authorized officer

Anu Evers

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.   
see 'Invitation to pay additional fees'
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/003012 A (MEDIMOLECULAR PTY LTD ; EDDIE LAWRENCE (AU); JAMES ROBERT (AU); KAZENW) 9 January 2003 (2003-01-09)	1-4, 7-15
Y	claims 1,3,9,18,20,26,33,35,41,55,57,63; example 4; lines 18-21 on page 1; lines 23-25 on page 7; from line 17 on page 18 to line 25 on page 19	2, 13-15
X	----- PILLUTLA RENUKA C ET AL: "A surrogate-based approach for post-genomic partner identification" BMC BIOTECHNOLOGY, vol. 1, no. 6 Cited May 5, 2002, 25 September 2001 (2001-09-25), pages 1-9 URL, XP001183723 ISSN: 1472-6750	1-7, 9-15
Y	abstract; last paragraph on page 2; last paragraph on page 6; paragraph joining left- and right-hand columns on page 7 ----- -/--	2, 13-15

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KWOK BENJAMIN H B ET AL: "The anti-inflammatory natural product parthenolide from the medicinal herb Feverfew directly binds to and inhibits IkappaB kinase" CHEMISTRY AND BIOLOGY (LONDON), vol. 8, no. 8, August 2001 (2001-08), pages 759-766, XP002297993 ISSN: 1074-5521 cited in the application	1-4,7-15
Y	abstract; figure 3; paragraph joining pages 761 and 762	2,13-15
X	----- KNOCKAERT M ET AL: "INTRACELLULAR TARGETS OF CYCLIN-DEPENDENT KINASE INHIBITORS: IDENTIFICATION BY AFFINITY CHROMATOGRAPHY USING IMMOBILISED INHIBITORS" CHEMISTRY AND BIOLOGY, CURRENT BIOLOGY, LONDON, GB, vol. 7, no. 6, June 2000 (2000-06), pages 411-422, XP001070114 ISSN: 1074-5521	1-4,7,9-15
Y	abstract; page 412, right-hand column, lines 17-27; page 421, left-hand column, lines 10-22	2,13-15
X	----- KNOCKAERT M ET AL: "Intracellular targets of paullones: Identification following affinity purification on immobilized inhibitor" JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 277, no. 28, 12 July 2002 (2002-07-12), pages 25493-25501, XP002262473 ISSN: 0021-9258	1-4,7,9-15
Y	abstract; page 25495, left-hand column, last paragraph - page 25496, left-hand column, second paragraph; page 25500, left-hand column, line 5 - right-hand column, line 5	2,13-15
X	----- GRAVES PAUL R ET AL: "Discovery of novel targets of quinoline drugs in the human purine binding proteome." MOLECULAR PHARMACOLOGY, vol. 62, no. 6, December 2002 (2002-12), pages 1364-1372, XP002297994 ISSN: 0026-895X	1-4,7,9-15
Y	abstract; figure 2; last paragraph of the right-hand column on page 1371	2,13-15
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99/35109 A (NEOGENESIS INC) 15 July 1999 (1999-07-15)	1-5,9-15
Y	claims 16,17,20,23,26; lines 5-8 on page 37; paragraph joining pages 37 and 38; examples 4,6	2,13-15
X	WO 02/057792 A (NEOGENESIS PHARMACEUTICALS INC) 25 July 2002 (2002-07-25)	1-5,9-15
Y	claims 1,9,11,37,38; examples 1,3,4,7,9	2,13-15
X	PANDEY AKHILESH ET AL: "Proteomics to study genes and genomes" NATURE, MACMILLAN JOURNALS LTD. LONDON, GB, vol. 405, no. 6788, 15 June 2000 (2000-06-15), pages 837-846, XP002172041 ISSN: 0028-0836 abstract; figures 4-5; page 844, right-hand column, fourth paragraph	1,3-5, 9-12
X	RIGAUT G ET AL: "A generic protein purification method for protein complex characterization and proteome exploration" NATURE BIOTECHNOLOGY, NATURE PUBLISHING, US, vol. 17, no. 10, October 1999 (1999-10), pages 1030-1032, XP002179540 ISSN: 1087-0156 abstract; paragraph joining pages 1031 and 1032; figure 1	1,3-5, 9-12
X	BROWN K C: "New approaches for cell-specific targeting: identification of cell-selective peptides from combinatorial libraries" CURRENT OPINION IN CHEMICAL BIOLOGY, CURRENT BIOLOGY LTD, LONDON, GB, vol. 4, no. 1, February 2000 (2000-02), pages 16-21, XP002233594 ISSN: 1367-5931 abstract; figure 1	1,5,9,12

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-15

Processes for the isolation and the identification of compounds, which bind to a given compound of interest, involving the purification of the complexes formed by the interacting compounds.

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2. claim: 16

Process for the identification of new medical uses of an active agent involving the identification of a molecule, which binds to the active agent, and the identification of the medical indication associated with the binding molecule.

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The present application generically relates to drug discovery, e.g to the identification of drug targets, to the screening of active agents, and to the identification of new medical indications for a known drug.

The common concept, which would link the processes of claims 1-15 with the process of claim 16, is the fact that all these processes concern the identification of binding species (see the preamble of independent claims 1-2 and steps a)-b) of claim 16).

This concept is not novel over the prior art, which discloses: (i) methods for the identification of drug targets by screening a proteome against known active agents and (ii) methods for the identification of active agents by screening compound libraries against therapeutically relevant biomolecules, wherein the screening procedures are based on binding interactions (see for example: W003/003012, claims 1, 3, 9, 18, 20, 26, 33, 35, 41, 55, 57 and 63; Pillutla et Al., the paragraph joining left- and right-hand columns on page 7; Kwok et Al., figure 3 and the paragraph joining pages 761 and 762; Knockaert et Al. (2000), the abstract and lines 17-27 of the right-hand column on page 412; Graves et Al., figure 2; W099/35109, claims 16, 23 and lines 5-8 on page 37; W002/057792, claims 1, 37, 38 and lines 7-11 on page 1).

Hence, this concept cannot be considered a single general inventive concept according to Rule 13.1 PCT, and a lack of unity "a posteriori" is indicated.

The processes of claims 1-15 are characterized by procedural steps, which involve the isolation of the complexes formed by the interacting species, whereas claim 16 does not refer to any of these procedural steps. Moreover, the specific procedure of any of the processes of claims 1-15 is not essential to carry out the process of claim 16, which is directed to the identification of the medical uses of an active agent and can be based on other methods for the identification of interacting species, e.g. two-hybrid techniques.

Having regards to the prior art and the remarks above, there is no single technical relationship between the processes of claims 1-15 and the process of claim 16 involving one or more of the technical features to

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International application No.

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which an inventive step could be addressed (Rule 13.2 PCT).

# Patent Family Annex

Information on patent family members

International Application No

PCT/EP2004/004883

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO 03003012	A	09-01-2003	WO	03003012 A1	09-01-2003
WO 9935109	A	15-07-1999	CA	2313957 A1	14-01-2002
			US	6207861 B1	27-03-2001
			EP	1045819 A1	25-10-2000
			JP	2002500205 T	08-01-2002
			WO	9935109 A1	15-07-1999
			US	2002172970 A1	21-11-2002
			US	2002182714 A1	05-12-2002
			US	2003138788 A1	24-07-2003
			US	6714875 B1	30-03-2004
			US	2004014137 A1	22-01-2004
			US	2003224409 A1	04-12-2003
WO 02057792	A	25-07-2002	CA	2433354 A1	25-07-2002
			EP	1379878 A2	14-01-2004
			WO	02057792 A2	25-07-2002
			US	2002164617 A1	07-11-2002